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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/616,324

**Applicant(s)**

KISHIGAMI, TAKASHI

**Examiner**

Neil R. McLean

**Art Unit**

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 February 2008.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1 and 2 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)  
3) ☐ Information Disclosure Statement(s) (PTO/SE-08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Status of Claims***

1. Claims 1-2 are now pending in this application.  
Independent Claims 1 and 2 have been amended.

### ***Response to Arguments***

2. Regarding Applicant's Argument:

"In the invention according to claim 1, the processes (1) and (2) described above are executed. In other words, when the job data is received, the computer divides the job into color data and monochromatic data and allocates the divided job data to the first image forming apparatus and the second image forming apparatus. At this time, the computer firstly transmits the monochrome job data to the first image forming apparatus and completes the job, and then receives a job-completion signal from the first image forming apparatus. The computer next receives a job-continuation signal from the second image forming apparatus when the materials from the first image forming apparatus are set on the post-processing tray, and then transmits a color job to the second image forming apparatus."

Examiner's Response:

FIG. 5 is the flowchart showing an example of a data processing procedure in the information processing apparatus according to the invention. S501 to S508 denote processing steps.

First, the print server 100 obtains color output information of the printer 120, that is, color output information regarding printer resources about whether the printer 120 and image processing apparatus 110 enable a color process or only a monochromatic (B/W) process to be executed (S501). The obtained color output information is stored in the main controller 102 in the print server 100 (S502) as described by Tokura in [0037].

If the page is determined to be a B/W page in step S506, an ejection command is added to the print data and the resultant data is transmitted to the image processing apparatus 110 which can perform the B/W process (S508).

The Examiner perceives the Flowchart of Figure 5 to show that the Tokura appears to batch pages by color and then sends them to the respective printers.

3. Regarding Applicant's Argument:

"Indeed, the Tokura reference discloses in Fig. 1 separate printers 120 and separate ejectors 130 and does not disclose any of the printers accepting output from another of the printers or mixing the output of two printers together in sequential order."

Examiner's Response:

In Tokura's Background of the Invention, He discloses a prior art print system that prints color pages and black and white pages that are outputted in parallel. Tokura goes on to say that:

"there is a problem such that the user has to do work for rearranging a page order.

[0008] Since the user also has to do work for rearranging sheets printed by each of the color printer and the B/W printer in the page order, it is troublesome.

[0009] Particularly, in case of printing a large quantity of sheets, a time which is required for the manual work of the user is also considerably long. Therefore, it is demanded to save such a time with respect to the above problem."

Figure 4 shows a printer and paper ejector with a sorting and a grouping function.

FIGS. 7A to 7C and 8A to 8C are diagrams for explaining distribution of the image data by the print server 100 shown in FIG. 1 and image output processing states by the paper ejector 130 connected to each printer 120 and correspond to a case where one printer 120 is the color printer and its paper ejector 130 is the sorter and a case where the other printer 120 is the B/W printer and its paper ejector 130 is the finisher, respectively.

Thus, the B/W pages and color pages which were distributed and outputted are sorted and ejected on an output page unit basis of the succeeding page numbers, respectively as described in [0065].

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being as being unpatentable over Tokura (US 2002/0041392).

Regarding Claim 1:

Tokura discloses an image forming system ([0023]; lines 4-7), comprising a computer (e.g., 150 in Figure 1), a first image forming apparatus capable of performing only monochrome printing (The printer in Figure 1 which performs monochrome printing), and a second image forming apparatus capable of performing color printing

(The printer in Figure 1 which performs color printing), which are connected with each other via a network (140 in Figure 1), wherein said computer has:

(a) a page-number appending function of appending page numbers onto job data (The portion of the print server 100 in Figure 1 which appends page numbers as shown for example in Figures 7A-7C; [0019]; lines 1-4),

(b) a job-data dividing function of dividing said job data into monochromatic print data and color print data ([0037]; lines 1-6),

(c) a job-data allocating function of allocating said monochromatic print job data and color print job data divided through said job-data dividing function, respectively, to said first image forming apparatus and said second image forming apparatus ([0025]; lines 1-9), and

(d) a data-transmitting/receiving function of transmitting said monochromatic print job data to said first image forming apparatus via said network, and transmitting said color print job data to said second image forming apparatus via said network ([0031]; lines 3-7) in response to reception of a job-process-continuation signal from said second image forming apparatus after receiving a job-completion signal from said first image forming apparatus (Page 5, Column 2, Claim 5,), said first image forming apparatus includes:

(a) first image formation means for forming a monochrome image on each of first recording materials in accordance with said monochromatic print job data transmitted from said computer (Figure 2 is a block diagram showing a detailed construction of the image processing apparatus),

(b) job-completion detection means for detecting completion of said monochromatic print job and then outputting said job-completion signal to said computer (Figure 10 shows the operation of the print server), and

(c) first communication means for allowing data communication with said computer via said network (Print Server 100 in Figure 1), said second image forming apparatus includes:

(a) second image formation means for forming a color image on each of second recording materials in order of page number in accordance with said color print job data transmitted from said computer (Figure 2 is a block diagram showing a detailed construction of the image processing apparatus),

(b) recording-material feed means for feeding said second recording materials to said second image formation means (See Step 507 and S508 in Figure 5),

(c) a post-processing device having a post-processing section with a post-processing tray, and a first discharge section, wherein said post-processing section is adapted to guide said second recording materials fed from said recording-material feed means and color-printed by said second image formation means, to said post-processing tray, so as to subject said second recording materials on said post-processing tray to a post-processing and then discharge said second recording materials from said post-processing tray onto a recording-material discharge tray, and said first discharge section is adapted to discharge said second recording materials fed from said recording-material feed means and color-printed by said second image

formation means, directly onto said recording-material discharge tray (Page 5, Column 2, Claim 5),

(d) job-process-continuation-signal input means for entering said job-process-continuation signal therethrough, wherein said job-process-continuation-signal input means is adapted to allow said job-process-continuation signal to be output to said computer only after said first recording materials with monochrome images formed by said first image forming apparatus are set on said post-processing tray of said post-processing device (See Step 507 and S508 in Figure 5),

(e) second communication means for allowing data communication with said computer via said network (Print Server 100 in Figure 1), and

(f) image-formation control means for controlling respective operations of said second image formation means, said recording-material feed means, said post-processing device, said job-process-continuation-signal input means and said second communication means (Print server 100 in Figure 1), and said image-formation control means has:

(1) a function of switching an operation of said post-processing device in such a manner that in response to said job-process-continuation signal entered from said job-process-continuation-signal input means, said second recording materials color-printed by said second image formation means are discharged directly onto said recording-material discharge tray through said first discharge section, and said post-processing section serving as a second discharge section to discharge said first recording materials set on said post-processing tray, onto said recording-material discharge tray without

subjecting said first recording materials set on said post-processing tray to said post-processing (Page 5, Column 2, Claim 5), and

(2) a recording-material mixing function of checking said page numbers of said color print job data transmitted from said computer (e.g., sorting function in Figure 4), and switching respective operations of said recording-material feed means and said post-processing means to allow color pages and monochrome pages to be mixed together while serializing their page numbers in a sequential order ([0038]).

Regarding Claim 2:

An image forming system ([0023]; lines 41-7) comprising a plurality of image forming apparatuses (e.g., 120's in Figure 1) and a computer (e.g., 150 in Figure 1), which are connected with each other via a network (140 in Figure 1), wherein each of said image forming apparatuses is adapted to be operated in accordance with job data from said computer, wherein said computer has:

(a) a page-number appending function of appending page numbers onto said job data (The portion of the print server 100 in Figure 1 which appends page numbers as shown for example in Figures 7A-7C; [0019]; lines 1-4),

(b) a job-data dividing function of dividing said job data in accordance with a given dividing rule ([0037]; lines 1-6),

(c) a job-data allocating function of allocating plural job data divided through said job-data dividing function, respectively, to specified image forming apparatuses ([0025]; lines 1-9), and

(d) a data-transmitting/receiving function of transmitting said plural job data allocated through said job-data allocating function, to said corresponding image forming apparatuses via said network ([0031]; lines 3-7), at least one of said image forming apparatuses includes:

(a) image formation means for forming an image on each of first recording materials in order of page number in accordance with said job data transmitted from said computer (Figure 2 is a block diagram showing a detailed construction of the image processing apparatus),

(b) recording-material feed means for feeding said first recording materials to said image formation means (See Step 507 and S508 in Figure 5),

(c) a post-processing device having a post-processing section with a post-processing tray, and a first discharge section, wherein said post-processing section is adapted to guide said first recording materials fed from said recording-material feed means and formed with images, to said post-processing tray, so as to subject said first recording materials on said post-processing tray to a post-processing and then discharge said first recording materials from said post-processing tray onto a recording-material discharge tray, and said first discharge section is adapted to discharge said first recording materials fed from said recording-material feed means and formed with images, directly onto said recording-material discharge tray (Page 5, Column 2, Claim 5),

(d) job-process-continuation-signal input means for entering a job-process-continuation-signal therethrough, wherein said job-process-continuation-signal input

means is adapted to allow said job-process-continuation signal to be output to said computer only after second recording materials with images formed by another one of said image forming apparatuses are set on said post-processing tray of said post-processing device (See Step 507 and S508 in Figure 5),

(e) communication means for allowing data communication with said computer via said network (Print Server 100 in Figure 1), and

(f) image-formation control means for controlling respective operations of said image formation means, said recording-material feed means, said post-processing device, said job-process-continuation-signal input means and said communication means (Print server 100 in Figure 1), and said image-formation control means has:

(1) a function of switching an operation of said post-processing device in such a manner that in response to said job-process-continuation signal entered from said job-process-continuation-signal input means, said first recording materials with images formed by said image formation means are discharged directly onto said recording-material discharge tray through said first discharge section, and said post-processing section serves as a second discharge section to discharge said second recording materials from said post-processing tray onto said recording-material discharge tray without subjecting said second recording materials set on said post-processing tray to said post-processing (Page 5, Column 2, Claim 5), and

(2) a recording-material mixing function of checking said page numbers of said job data transmitted from said computer (e.g., sorting function in Figure 4), and switching said respective operations of said recording-material feed means and said

post-processing device to allow said second recording materials with images formed by said another image forming apparatus and said first recording materials with images formed by said image formation means to be mixed together while serializing their page numbers in a sequential order ([0038]).

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kato (US 6,738,151) discloses a distributed processing server capable of applying distributed processing on one job which is inputted from a client and consists of a plurality of pages by at least two image recording apparatuses.

### ***Examiner Notes***

7. The Examiner cites particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that, in preparing responses, the applicant fully considers the references in its entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or as disclosed by the Examiner.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil R. McLean whose telephone number is (571)270-1679. The examiner can normally be reached on Monday through Friday 7:30AM-4:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571.272.7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Neil R. McLean/  
Examiner, Art Unit 2625  
6/11/2008

/David K Moore/  
Supervisory Patent Examiner, Art Unit 2625